



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,020	03/21/2000	Jeffrey Paul Grundvig	GRUNDTVIG 23	7469
7590	01/20/2004		EXAMINER	
& Manelli Pllc 2000 M Street NW 7th Floor Washington, DC 20036-3307			DAVIS, TEMICA M	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/532,020

Applicant(s)
Grundvig

Examiner
Temica M. Davis

Art Unit
2681



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Mar 21, 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 2681

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 5, 10-15, 17-21, 23, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Iyengar et al (Iyengar), U.S. Patent No. 6,349,213.

Art Unit: 2681

Regarding claim 1, Iyengar discloses in a digital cordless telephone system, a full-duplex audio path between a base unit and a remote handset, comprising an unbalanced coding scheme wherein digital audio transmitted in a first direction over said full-duplex audio path is encoded using a first encoding scheme different from a second encoding scheme used to encode digital audio transmitted over said full-duplex audio path in a second direction opposite said first direction (col. 7, line 20-col. 8, line 29)

Regarding claim 2, Iyengar discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein a first encoding algorithm of said first encoding scheme is different from a second encoding algorithm of said second encoding scheme (i.e., speech coding technique and ADPCM) (col. 7, lines 30-65).

Regarding claim 3, Iyengar discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein: a bit rate of said first encoding scheme is different from a bit rate of said second encoding scheme (col. 3, lines 10-25).

Regarding claim 5, Iyengar discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 1, wherein: said first encoding scheme is provided in a base unit of said digital cordless telephone system; and said second encoding scheme is provided in a remote handset of said digital cordless telephone system (col. 7, line 20-col. 8, line 29).

Art Unit: 2681

Regarding claim 10, Iyengar discloses a method of providing an unbalanced coding scheme in a digital cordless telephone, comprising: providing a first radio frequency bandwidth for transmission of encoded digitized audio data from a base unit to a corresponding remote handset; and providing a second radio frequency bandwidth inherently different from said first radio frequency bandwidth, for transmission of encoded digitized audio data from said remote handset to said base unit (col. 3, lines 10-25 and col. 7, line 20-col. 8, line 29).

Regarding claim 11, Iyengar discloses the method of providing an unbalanced coding scheme in a digital cordless telephone according to claim 10, wherein: said first radio frequency bandwidth is inherently significantly larger than said second radio frequency bandwidth (col. 3, lines 10-25).

Regarding claim 12, Iyengar discloses an apparatus for providing an unbalanced coding scheme in a digital cordless telephone, comprising: means for providing a first radio frequency bandwidth for transmission of encoded digitized audio data from a base unit to a corresponding remote handset; and means for providing a second radio frequency bandwidth different from said first radio frequency bandwidth, for transmission of encoded digitized audio data from said remote handset to said base unit (col. 3, lines 10-25 and col. 7, line 20-col. 8, line 29).

Regarding claim 13, Iyengar discloses the apparatus for providing an unbalanced coding scheme in a digital cordless telephone according to claim 12, wherein: said first radio frequency bandwidth is significantly larger than said second radio frequency bandwidth (col. 3, lines 10-25).

Art Unit: 2681

Regarding claim 14, Iyengar discloses a digital cordless telephone system, comprising: a base unit having an audio encoding scheme of a first type; and a remote handset having an audio encoding scheme of a second type different from said first type (col. 7, line 20-col. 8, line 29).

Regarding claim 15, Iyengar discloses the digital cordless telephone system according to claim 14, wherein: said first type encoding scheme in said base unit has a faster bit rate than said second type encoding scheme in said remote handset (col. 3, lines 10-25).

Regarding claim 17, Iyengar discloses in a digital cordless telephone system, a full-duplex audio path between a base unit and a remote handset, comprising: an unbalanced coding scheme wherein digital audio transmitted in a first direction over said full-duplex audio path is encoded using a first analog-to-digital conversion precision different from a second analog-to-digital conversion precision used to encode digital audio transmitted over said full-duplex audio path in a second direction opposite said first direction (col. 7, line 20-col. 8, line 29).

Regarding claim 18, Iyengar discloses in a digital cordless telephone system, the full-duplex audio path between a base unit and a remote handset according to claim 17 wherein: said first analog-to-digital precision is 12 bits or fewer; and said second analog-to-digital precision is greater than 12 bits (col. 2, lines 1-4 and col. 3, lines 10-25).

Regarding claim 19, Iyengar discloses in a digital communications system, a full-duplex audio path between two devices communicating with one another, comprising: an unbalanced coding scheme wherein digital audio transmitted in a first direction over said full-duplex audio

Art Unit: 2681

path is encoded using a first encoding scheme different from a second encoding scheme used to encode digital audio transmitted over said full-duplex audio path in a second direction opposite said first direction (col. 7, line 20-col. 8, line 29).

Regarding claim 20, Iyengar discloses in a digital communications system according to claim 19, wherein: a first encoding algorithm of said first encoding scheme is different from a second encoding algorithm of said second encoding scheme (col. 7, lines 30-65).

Regarding claim 21, Iyengar discloses in a digital communications system according to claim 19, wherein: a bit rate of said first encoding scheme is different from a bit rate of said second encoding scheme (col. 3, lines 10-25).

Regarding claim 23, Iyengar discloses in a digital communications system according to claim 19, wherein: said first encoding scheme is provided in a base unit of a cellular network; and said second encoding scheme is provided in a mobile handset of said cellular network (col. 7, line 20-col. 8, line 29).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2681

5. Claims 4, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iyengar.

Regarding claims 4 and 22, Iyengar discloses the digital cordless telephone system according to claims 2 and 20 as described above.

Iyengar, however, fails to disclose wherein a bit rate of said first encoding scheme is substantially equal to a bit rate of said second encoding scheme.

However, the examiner contends that at the time of invention, such a feature would have been obvious to one of ordinary skill in the art since it is known that there are coding schemes which have similar qualities to each other, including having a similar bit rate. Such an implementation would only involve routine skill in the art.

6. Claims 6-9, 16 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iyengar in view of Borland, U.S. Patent No. 6,343,217.

Regarding claims 6 and 24, Iyengar discloses the digital communications system according to claims 5 and 23 as described above.

Iyengar, however, fails to disclose wherein said first encoding scheme comprises uncompressed encoding.

In a similar field of endeavor, Borland discloses digital cordless telephony with PCM coding. Borland also discloses uncompressed encoding (col. 1, lines 24-48).

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Iyengar with the teachings of Borland since such encoding has been

Art Unit: 2681

widely used in digital cordless systems for digitally encoding signals. Such an implementation would only involve routine skill in the art.

Regarding claims 7 and 25, the combination of Iyengar and Borland discloses a digital cordless telephone system according to claims 6 and 24, wherein said second encoding scheme comprises ADPCM encoding (Iyengar, col. 7, lines 34-39).

Regarding claims 8 and 26, the combination of Iyengar and Borland discloses a digital cordless telephone system according to claims 7 and 25, wherein said ADPCM encoding has a bit rate of no greater than 32 kb/s (Iyengar, col. 2, lines 40-50).

Regarding claims 9 and 27, the combination of Iyengar and Borland discloses a digital cordless telephone system according to claims 6 and 24, wherein said uncompressed encoding comprises at least one of p-law and A-law encoding at 64 kb/s (Borland, col. 5, line 67-col. 6, line 8).

Regarding claim 16, Iyengar discloses the digital cordless telephone system according to claim 14 as described above, and further discloses wherein the second type of encoding scheme comprises one of ADPCM and CELP (col. 2, lines 40-50).

Iyengar, however, fails to disclose wherein the first type of encoding scheme comprises one of A-law or u-law.

Borland discloses various types of encoding that can be used in digital communications including A-law or u-law (col. 5, line 67-col. 6, line 8).

Art Unit: 2681

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Iyengar with the teachings of Borland since such encoding has been widely used in digital cordless systems for digitally encoding signals. Such an implementation would only involve routine skill in the art.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached on Monday-Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Sinh Tran, can be reached on (703) 305-4040.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service at (703) 306-0377.

Any response to this communication should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

Or faxed to:

(703) 872-9314 (for any communications intended for entry).

Art Unit: 2681

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).*

TMD

October 6, 2003


TEMICA M. DAVIS
PATENT EXAMINER